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The impact of interactive voice response message reminders on health and nutrition outcomes in northern Ghana

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Abstract

In 2022, 1801 households receiving Livelihood Empowerment Against Poverty (LEAP) cash transfer with children under 10 years in Northern Ghana were randomly selected to receive WASH and/or nutrition or placebo messages through interactive voice response (IVR). The experiment presents the opportunity to analyse the impact of digital communication (i.e., interactive voice response (IVR) reminders) on safe water behaviours, health and nutrition outcomes in Northern Ghana. Data analysis techniques employed include intention-to-treat (ITT) and analysis of covariance (ANCOVA). After seven months of receiving the digital messages, the results showed positive impact on safe water behaviours (including treatment of water to make it safer for consumption), cleanliness of the dwelling, and self-reported health status). Interestingly, the study found improvement in weight for height and body mass for age z-scores of children under 10 years. The study found considerable heterogeneity based on receipts of specific messages. A qualitative analysis also revealed that the health and nutrition messages are effectively communicated to the respondents via the IVR. Based on the accounts of the respondents, there are observable changes in health and nutrition outcomes among treatment households which were attributed to the IVR messages. Additionally, a quantitative survey conducted in November/December 2024 (i.e., about one and half years after the dissemination of the messages) shows that most of the positive impacts on WASH behaviour, child health and nutrition outcomes have waned. In conclusion, the results imply that digital communication could be cost effective “social marketing” strategy in enhancing WASH behaviour change, environmental quality and nutrition outcomes of poor households in developing countries where access to digital services and infrastructure remains low. Based on the limited success in using traditional approaches including in-person communication in achieving WASH behaviour changes, the results highlight the importance of using digital technologies in addressing major public challenges such as low nutrition outcomes in developing countries.

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